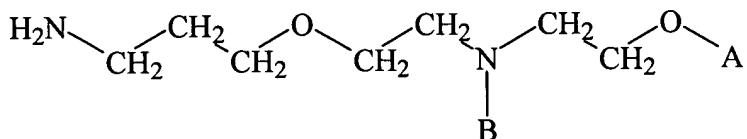


ABSTRACT

A water-base fluid for use in drilling, cementing, workover, fracturing and abandonment of subterranean wells through a formation containing a shale which swells in the presence of water. In one illustrative embodiment, the drilling fluid includes, an aqueous based continuous phase, a weighting agent, and a shale hydration inhibition agent. The shale hydration inhibition agent should have the general formula:



10 in which A is independently selected from H and $\text{CH}_2\text{CH}_2\text{CH}_2\text{NH}_2$; and in which
11 B is independently selected from H, $\text{CH}_2\text{CH}_2\text{OH}$, $\text{CH}_2\text{CH}_2\text{OCH}_2\text{CH}_2\text{CH}_2\text{NH}_2$ and
12 $\text{CH}_2\text{CH}_2\text{CH}_2\text{NH}_2$. The shale hydration inhibition agent is present in sufficient
13 concentration to substantially reduce the swelling of shale drilling cuttings upon contact
14 with the drilling fluid. The drilling fluid may be formulated to include a wide variety of
15 components of aqueous based drilling fluids, such as weighting agents, fluid loss control
16 agents, suspending agents, viscosifying agents, rheology control agents, as well as other
17 compounds and materials known to one of skill in the art. The fluids may also be used in
18 the disposal by reinjection of drilling cutting into a selected subterranean disposal
19 formation.